

Study program: Engineering Management				
Type and level of studies: Master studies (second level of studies)				
Course unit: Intelligent Decision Support Systems				
Teacher in charge: Zoran Nešić				
Language of instruction: English				
ECTS: 6				
Prerequisites: -				
Semester: Winter				
Course unit objective				
The aim of the course is to teach students to employ the methods of intelligent decision support in managerial practices, through theoretical basis, case studies, examples and project tasks.				
Learning outcomes of Course unit				
After attending the complete course, students will possess basic theoretical knowledge about the concepts, types and capabilities of the system for decision support and use appropriate specialized software tools for intelligent decision making.				
Course unit contents				
<i>Theoretical classes</i>				
The concept and evolution of decision support systems. Types of problems suitable for solving by decision support systems. From simple towards intelligent decision support systems (IDSS). Architecture IDSS's. Analysis and Design of IDSS's. Models of IDSS's. Tools and techniques of IDSS's. Areas of application. Engineering knowledge. Methods of knowledge representation. Data warehouses. Types of data warehouses. Sources of data. Designing of a data warehouse. The implementation of a data warehouse. Advanced methods of data mining. OLAP Analytical data processing.				
<i>Practical classes</i>				
Exercises include the application of the course material in solving practical problems (tasks) with appropriate software support. The work on standalone students projects - construction of OLAP systems, expert systems on the problem of decision making.				
Literature				
[1] E. Turban, J. E. Aronson, T.P. Liang, <i>Decision Support Systems and Intelligent Systems</i> , Prentice Hall, NY, 2011.				
[2] Radojicic M, Vesic Vasovic J., Nestic Z., Application of optimization methods in the function of improving performance of organizational systems, Monograph, Faculty of Technical Sciences Čačak, 2012.				
Number of active teaching hours				
Lectures: 2	Practice: 2	Other forms of classes	Independent work: 2	Other classes
Teaching methods Lessons, consultations, study and research work				
Examination methods (maximum 100 points)				
Exam prerequisites	No. of points:	Final exam	No. of points:	
Student's activity during lectures	10	oral examination	30	
Practical classes/tests	-	written examination		
Seminars/homework	30		
Project	30			
Other				
Grading system				
Grade	No. of points	Description		
10	91-100	Excellent		
9	81-90	Exceptionally good		
8	71-80	Very good		
7	61-70	Good		
6	51-60	Passing		
5	less than 50	Failing		